8120-08-P

TENNESSEE VALLEY AUTHORITY

Shawnee Fossil Plant New Coal Combustion Residual Landfill

AGENCY: Tennessee Valley Authority.

ACTION: Issuance of Record of Decision.

SUMMARY: This notice is provided in accordance with the Council on Environmental Quality's regulations and Tennessee Valley Authority's (TVA) procedures for implementing the National Environmental Policy Act (NEPA). TVA has decided to construct and operate an onsite landfill at the Shawnee Fossil Plant (SHF). A notice of availability (NOA) of the Final EIS for Shawnee Fossil Plant Coal Combustion Residual (CCR) Management was published in the Federal Register on December 8, 2017. The Final EIS identified TVA's preferred alternative as Alternative B – Construction of an Onsite CCR Landfill, Closure-in-Place of Ash Impoundment 2 with a reduced footprint, and Closure-in-Place of the former Special Waste Landfill. TVA's current decision pertains only to the construction of a new onsite CCR landfill, and would achieve part of the project purpose and need by providing additional long-term disposal for dry CCR materials produced at SHF. TVA is electing to further consider the alternatives for closure of Ash Impoundment 2 and the former Special Waste Landfill (SWL) before making a decision.

FOR FURTHER INFORMATION, CONTACT: Ashley Pilakowski, Project Environmental Planning, NEPA Specialist, Tennessee Valley Authority, 400 W. Summit Hill Drive Knoxville, TN 37902; telephone 865-632-2256, or by email aapilakowski@tva.gov. The Final EIS, this Record of Decision and other project documents are available on TVA's website https://www.tva.gov/nepa.

SUPPLEMENTAL INFORMATION:

Currently, SHF consumes an average of 2.7 million cubic yards of coal per year and generates approximately 8 billion kilowatt-hours of electricity a year (enough to supply 540,000 homes). Until December 2017, SHF produced approximately 183,000 cubic yards of coal combustion residuals (CCR) a year. In December 2017, newly installed selective catalytic reduction (SCR) and flue gas desulfurization (FGD) systems became operational on SHF Units 1 and 4, increasing the amount of CCR to an estimated 490,000 cubic yards per year. All CCR currently are managed in the existing onsite landfill and Ash Impoundment 2. The CCR generated by the plant include fly ash, bottom ash and dry scrubber product.

The existing onsite landfill, formerly the Special Waste Landfill (SWL), had a state landfill permit. However, it is now considered a CCR Landfill under a Registered Permit-by-Rule with the Kentucky Division of Waste Management effective September 21, 2017. The estimated remaining capacity for the former SWL is approximately 5.2 million cubic yards. Due to current and projected SHF operations, it is expected the former SWL will reach capacity by 2027. To accommodate the need for additional dry CCR storage at SHF, TVA is proposing to design, build, and operate a new CCR Landfill that would accommodate up to 20 additional years of storage capacity. SHF is expected to produce approximately 490,000 to 910,000 cubic yards of CCR per year until 2040. The low-end of this range is based on the current plant configuration, including the use of SCR and FGD systems on SHF Units 1 and 4. The higher-end of this range provides the maximum CCR output that could be anticipated should TVA elect to explore the option of installing similar emission controls on the other SHF units in the future. At present, TVA has no plans to install such systems. Approximately 10 to 20 million cubic yards of disposal capacity is desired for the 20-year SHF comprehensive disposal plan.

The purpose of this action is to support the need for additional capacity for the long-term management of CCR at SHF. Additional storage capacity would also enable TVA to continue operations at SHF as planned and would be consistent with TVA's voluntary commitment to convert wet CCR management systems to dry systems.

Alternatives Considered

In 2015, TVA performed a siting study to evaluate onsite and offsite alternatives for the construction of a landfill for storage of dry CCR from SHF. The siting study identified six alternative sites (Options 1 through 6), within 5 to 10 miles of the plant, for the construction and operation of a new CCR Landfill. The siting study also considered the offsite transport of CCR to one of three existing permitted third-party landfills as a potential alternative. The impacts of development and/or use of each of the landfill alternatives were further evaluated against environmental and engineering factors to determine those sites that should be carried forward for further analysis in the study. Ultimately, one site for construction and operation of a new CCR Landfill (Option 1) and one existing permitted third-party landfill (Freedom Waste Landfill) were identified as potential alternatives to be carried forward for further evaluation.

TVA used results of the preliminary alternatives analysis to identify two feasible action alternatives for onsite disposal of CCR at SHF, in addition to a No-Action alternative (Alternative A), which served as a baseline.

Alternative A – No Action. Under the No Action Alternative, TVA would not construct and operate the proposed CCR Landfill at or near SHF, or haul CCR to an existing offsite permitted landfill. Since there is limited capacity for additional CCR disposal onsite, at some point in the future, capacity to store CCR onsite will become a limiting factor for continued SHF operations. TVA's 2015 Integrated Resource Plan (TVA 2015c) identifies SHF as a facility that will continue to operate in the near term as part of its balanced portfolio of energy resources. However, SHF cannot continue to operate if it

is not compliant with the CCR Rule. Under the No Action Alternative, SHF's operations would not comply with the CCR Rule; therefore, this alternative would not meet the Purpose and Need for the proposed action and is not considered viable or reasonable. It does, however, provide a benchmark for comparing the environmental impacts of implementation of Action Alternatives B and C.

Alternative B – Construction and Operation of an Onsite Landfill. Under Alternative B, TVA would build and operate a new CCR Landfill on a portion of the original Option 1 site known as the Shawnee East Site. The Shawnee East Site consists of about 205 acres that TVA acquired in 2016 next to the eastern boundary of SHF. This site would also be used for borrow material for both construction of the new CCR Landfill and potentially for the closures of Ash Impoundment 2 and the former SWL.

Alternative C – CCR Disposal at Permitted Offsite Landfill. Under Alternative C, dry CCR produced by daily operations at SHF would be transported by truck to the Freedom Waste Landfill in Mayfield, Kentucky (approximately 32 miles from SHF) along public roadways. No landfill would be constructed on the Shawnee East Site, but borrow materials from that site potentially would be used in the closures of Ash Impoundment 2 and the former SWL. Barge and rail transport were not considered feasible options for this EIS given the lack of existing infrastructure.

Environmentally Preferable Alternative

TVA has concluded that Alternative A, the No Action Alternative, is the environmentally preferable alternative as it would result in fewer environmental impacts than Alternatives B and C. Under Alternative A, no additional land area would be required for CCR disposal. Eventually, the former SWL would reach capacity which could force reduced operations at SHF potentially eliminating the long-term impacts associated with air emissions.

However, Alternative A (No Action) does not meet the purpose and need for the project. Because SHF provides base-load power for a large portion of TVA's service territory, stopping operations at SHF is not consistent with TVA's mission or its 2015 Integrated Resource Plan. Continuing current operations would not comply with the CCR Rule therefore the No Action Alternative is not consistent with this proposed project's purpose and need. Implementation of Alternative B would result in minimal unmitigated impacts to the environment, most of which would be related to construction activities that would be temporary in nature and minimized with implementation of best management practices.

Potential impacts associated with the discharge of storm water from the new landfill would be mitigated as needed to ensure compliance with the Clean Water Act. There would be moderate impacts to visual resources associated with changes in the viewshed around the new landfill. Additionally, there would be minor to moderate noise impacts in the vicinity of the new landfill as a result of construction and operational noise. The visual resources and noise impacts would be partially mitigated by the construction and maintenance of a vegetative barrier around the boundaries of the new landfill. Tree removal would result in a loss of potentially suitable foraging and roosting habitat for endangered bat species. Any tree removal would be scheduled so that all tree clearing would be conducted between October 15 and March 31, outside the breeding season. Impacts to wetlands would be mitigated through the U.S. Army Corps of Engineers Clean Water Act Section 404 permit. The proposed CCR Landfill would have no significant impact on floodplains, which would be consistent with EO 11988. TVA consulted with the Tennessee State Historic Preservation Officer (SHPO) on the proposed actions. In fall 2017, the SHPO concurred with TVA's recommendation that there would be no adverse effect to archaeological resources and no adverse effect to historic properties as a result of the proposed CCR landfill.

Under Alternative C, impacts to air quality, transportation, solid waste and hazardous waste and hazardous materials, and public health and safety would be higher than under Alternative B because of the transportation of CCR materials from SHF to an offsite landfill. The use of an existing, permitted landfill would result in no other additional impacts to the natural environment beyond those described for Alternative B.

Public Involvement

On November 1, 2016, TVA published a Notice of Intent (NOI) in the Federal Register announcing the plan to prepare an EIS to address the potential environmental effects associated with ceasing operations at the former SWL and Ash Impoundment 2 and constructing, operating, and maintaining a new CCR Landfill at SHF. The 30-day public scoping period concluded on December 1, 2016. TVA also sent the NOI to local and state government entities and federal agencies; published notices regarding this effort in local newspapers; issued a press release to media; posted the news release on the TVA website; and notified residents within a three-mile radius of the plant.

TVA hosted an open house scoping meeting on November 15, 2016, at the Robert Cherry Civic Center in Paducah, Kentucky. Comments were received in relation to the project purpose and need, alternatives, impact analysis, cumulative impacts, groundwater and surface water, aquatic ecology and threatened and endangered species, general environmental concerns, transportation, the NEPA Process and Scoping Meeting, and other general topics.

The Draft EIS was released to the public on June 9, 2017, and a notice of availability including a request for comments on the Draft EIS was published in the Federal Register on June 16, 2017. In association with the publication of the Draft EIS, TVA hosted a public meeting on June 22, 2017, at the Robert Cherry Civic Center in Paducah, Kentucky. Notification of the public meeting was sent to local residents adjacent to the SHF plant, and also published in local newspapers. Local and regional

stakeholders, governments, and other interested parties were also informed of the publication of the Draft EIS and provided information about the public meeting. TVA received a total of 83 comments from eight commenters in relation to the Draft EIS.

The NOA for the Final EIS was published in the Federal Register on December 8, 2017.

Decision

TVA has chosen a phased decision-making approach for CCR Management at SHF. TVA has decided to construct and operate an onsite CCR Landfill at SHF. This decision would achieve a portion of the purpose and need of the project and avoid offsite transfer of CCR along public roads, thus eliminating the long-term impacts associated with air emissions, increased traffic and associated safety risks, and disruptions to the public that would be associated with such offsite transport under Alternative C – CCR Disposal at a Permitted Offsite Landfill.

TVA is continuing to review and consider the alternatives regarding closure of Ash Impoundment 2 and the former SWL and will issue a decision and any additional documentation at a future date.

Mitigation Measures

TVA would use appropriate best management practices during all phases of construction and operation of the landfill. Mitigation measures, actions taken to reduce adverse impacts associated with proposed action, include:

- Due to the loss of potentially suitable foraging and roosting habitat for endangered bat species, TVA completed Section 7 consultation with the United States Fish and Wildlife Service (USFWS). Any tree removal would be scheduled so that all tree clearing would be conducted between October 15 and March 31, outside of the bats' breeding season.

- Prior to disturbing a 0.7-acre wetland on the Shawnee East Site, TVA would obtain a Clean Water Act Section 404 permit for impacts that could occur in conjunction with clearing, excavating, or grading during landfill construction. Where impacts to wetlands cannot be avoided, TVA would mitigate impacts in accordance with the Section 404 permit, as determined in consultation with the USACE.
- To minimize visual and noise impacts, TVA would plant and maintain a vegetative buffer around the proposed CCR Landfill as a natural screen.
- TVA would avoid the sites in the vicinity of the Shawnee East Site that are eligible for the National Register of Historic Places.

Dated: January 16, 2018.

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